



09/649960

GJK

ASA-715-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent No. of

T. WATANUKI et al

Patent No. 6,868,089 B1

Issued: March 15, 2005

For: MOBILE NODE, MOBILE AGENT AND NETWORK SYSTEM

Certificate
JUN 06 2005
of Correction

REQUEST FOR CERTIFICATE OF CORRECTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

June 1, 2005

Sir:

Enclosed are a completed Certificate of Correction form, and a copy of the front page of the above-referenced issued patent, marked with red ink indicating an error in the section entitled "Related U.S. Application Data". Please issue a Certificate of Correction with this information omitted.

Since the Certificate of Correction is necessitated by an error on the part of the U.S. Patent and Trademark Office, a fee is not enclosed.

JUN 07 2005

However, if necessary, the Commissioner is hereby
authorized to charge any payment due to Deposit Account No.
50-1417.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Daniel J. Stanger". The signature is fluid and cursive, with the first name "Daniel" and last name "Stanger" clearly distinguishable.

Daniel J. Stanger
Registration No. 32,846

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
1800 Diagonal Road, Suite 370
Alexandria, Virginia 22314
Telephone: (703) 684-1120
Date: June 1, 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,868,089 **B1**
 DATED : March 15, 2005
 INVENTOR(S) : T. Watanuki et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Please delete the following phrase from the section entitled "Related U.S. Application Data".

[Continuation of application No. 09/640,960, filed on Aug.
 29, 2000, which is a **]**

MAILING ADDRESS OF SENDER:

**MATTINGLY, STANGER
 MALUR & BRUNDIDGE, P.C.**

**1800 DIAGONAL ROAD, SUITE 370
 ALEXANDRIA, VA 22314**

PATENT NO.

6,868,089 **B1**

No. of additional copies



This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

JUN 07 2005



US006868089B1

(12) **United States Patent**
Watanuki et al.

(10) Patent No.: **US 6,868,089 B1**
(45) Date of Patent: ***Mar. 15, 2005**

(54) **MOBILE NODE, MOBILE AGENT-AND NETWORK SYSTEM**

(75) Inventors: **Tatsuya Watanuki, Yokohama (JP); Tetsuo Oura, Yokohama (JP); Sunao Sawada, Yokohama (JP)**

(73) Assignee: **Hitachi, Ltd., Tokyo (JP)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 696 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/649,960**

(22) Filed: **Aug. 29, 2000**

Related U.S. Application Data

(63) ~~Continuation of application No. 09/649,960, filed on Aug. 29, 2000, which is a continuation of application No. 09/073,857, filed on May 7, 1998, now Pat. No. 6,172,986.~~

(30) **Foreign Application Priority Data**

May 13, 1997 (JP) 09-122323
Aug. 11, 1997 (JP) 09-216737

(51) Int. Cl.⁷ **H04L 12/66**
(52) U.S. Cl. **370/466; 370/401**
(58) Field of Search **370/466, 465, 370/401, 393, 402, 467; 707/7, 104; 709/249**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,457,680 A • 10/1995 Kamm et al.
5,809,501 A • 9/1998 Nove
5,862,481 A • 1/1999 Kulkarni et al. 455/432.2
5,946,634 A • 8/1999 Korpela 455/552
6,011,795 A • 1/2000 Varghese et al.
6,018,524 A • 1/2000 Turner et al.
6,038,233 A • 3/2000 Hamamoto et al. 370/401
6,055,236 A • 4/2000 Nessett et al.
6,061,650 A • 5/2000 Malkin et al. 704/228

6,118,784 A • 9/2000 Tsuchiya et al. 370/401
6,172,986 B1 • 1/2001 Watanuki et al. 370/466
6,407,988 B1 • 6/2002 Agraharam et al. 370/328
6,442,616 B1 • 8/2002 Inoue et al. 709/245

FOREIGN PATENT DOCUMENTS

JP 1 307 029 A2 • 5/2003 H04L/29/12
KR 1 331 792 A2 • 7/2003 H04L/29/06

OTHER PUBLICATIONS

Affl et al., "Methods for IPv4-IPv6 Transition," 1999, IEEE, 478-484.
Grosse et al., "Network processor applied to IPv4/IPv6 Transition," 2003, IEEE Network, 35-39.
RFC 1541, "Dynamic Host Configuration Protocol", Oct. 1993.
RFC 2002, "IP Mobility Support", Oct. 1996.
Internet-Draft, "Mobility Support in IPv6", Nov. 26, 1996.

* cited by examiner

Primary Examiner—Kenneth Vanderpuye

(74) Attorney, Agent, or Firm—Mattingly, Stanger, Malur & Brundidge, P.C.

(57) **ABSTRACT**

A mobile node moves from a first IP (Internet Protocol) network to a second IP network in a network system in which the first IP network capable of executing communication in accordance with both first and second kinds of IPs and the second IP network capable of executing communication in accordance with only the first kind of IP are connected with each other. When the mobile node communicates a message with other nodes on the first network after its movement in accordance with the second kind of IP, a header for the movement containing both home and foreign addresses of the first kind in IP is added to a header containing home and foreign addresses in the second kind of IP, and put to the message, is added. The message to which the movement header is thus added is used for the communication between a first mobile agent on the first network and a second mobile agent on the second network, or between the mobile node and the first mobile agent.

25 Claims, 40 Drawing Sheets

